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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,687

03/29/2004

Boris Ginzburg

P-6582-US

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27130 7590 03/22/2007  
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EXAMINER

GELIN, JEAN ALLAND

ART UNIT

PAPER NUMBER

2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/810,687

Applicant(s)

GINZBURG ET AL.

Examiner

Jean A. Gelin

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-15, 22-24, 29, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 5-11, 16-21, 25-28, 30-31, 34-35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 12-15, and 32-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (US 2005/0141459).

Regarding claims 1, 12, and 32, Li teaches selecting, based on a predetermined criterion related to a successful transmission of a data packet, one of at least first and second protection mechanisms to protect said data packet (i.e., RTS and CTS symbols can be transmitted in such a way to protect long data packet from collision [0037], [0038], and [0049]).

Regarding claims 2, 13, and 33, Li teaches selecting to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism (MIMO or OFDM modulation and RTS protection [0032]-[0038], and [0052]), to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism (MIMO or OFDM modulation and CTS protection [0037], and [0049]), or to modulate said data packet using a second modulation type (i.e., SDMA modulation [0034] and [0056]).

Regarding claims 3, 14, Li teaches said first modulation type comprises orthogonal frequency division multiplexing, and wherein said second modulation type comprises direct sequence spread spectrum/complementary code keying ([0037], [0038], [0052], and [0060]).

Regarding claims 4, 15, Li teaches wherein said first protection mechanism comprises a request-to-send/clear-to-send protection mechanism, and wherein said second protection mechanism comprises a clear-to-send-to-self protection mechanism ([0037], [0038], and [0049]).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22-24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 2005/0141459) in view of Li et al. (US 2005/0146470).

Regarding claims 22, 29, Li (459) teaches wireless device comprising: a controller able to select, based on a predetermined criterion related to a successful transmission of a data packet, one of at least first and second protection mechanisms to protect said data packet (i.e., RTS and CTS symbols can be transmitted in such a way to protect long data packet from collision [0037], [0038], and [0049]). Li (459) further teaches the use of more than one antenna to transmit data packets (see, access STAT

104, [0018]-[0019]), and typically more than one access STA 102 are in the system allowing users to transfer information in packets data between them.

Li (459) teaches the use of more than one antenna to transmit data packets, but Li (459) fails to teach one or more omni-directional antennas able to transmit said data packet.

However, the preceding limitation is known in the art of communications. Li (470) teaches two omni-directional antennas are mounted on a laptop computer to provide spatial diversity to combat multipath fading ([0001]). Li (470) teaches multiple sectored antennas forms omni-directional antenna, the access point uses directional antenna, and the mobile station uses a plurality of sectored antennas to transmit packet on particular sub-bands ([0024]-[0025]). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Li (470) within the system Li (459) in order that the combination of various sectors may cover a radiation pattern of 0-360 degrees as an effective omni-directional antenna, and provide an antenna system that significantly improves the performance of devices operating in a WLAN network.

Regarding claims 23, Li (459) in view of Li (470) teaches all the limitations above. Li further teaches selecting to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism (MIMO or OFDM modulation and RTS protection [0032]-[0038], and [0052]), to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism (MIMO or OFDM modulation and CTS protection [0037], and

Art Unit: 2617

[0049]), or to modulate said data packet using a second modulation type (i.e., SDMA modulation [0034] and [0056]).

Regarding claims 24, Li (459) in view of Li (470) teaches all the limitations above. Li further teaches wherein said first protection mechanism comprises a request-to-send/clear-to-send protection mechanism, and wherein said second protection mechanism comprises a clear-to-send-to-self protection mechanism ([0037], [0038], and [0049]).

#### ***Allowable Subject Matter***

5. Claims 5-11, 16-21, 25-28, 30-31, and 34-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

El Batt	US 2003/0152086	08/14/2003
Stephen et al.	US 2005/0032478	02/10/2005
Sugar et al.	US 2002/0061031	05/23/2002
Hortenstus et al.	US 6,252,854	06/26/2001
Tsien et al.	US 2005/0128970	06/16/2005
Choi et al.	US 6,978,151	12/20/2005

Art Unit: 2617

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A. Gelin whose telephone number is (571) 272-7842. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J. Gelin  
March 17, 2007

**JEAN GELIN**  
**PRIMARY EXAMINER**

A handwritten signature in cursive script that reads "Jean Gelin".